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09/845,844	04/30/2001	04/30/2001 Robert E. Johnson		3208
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HEWLETT-PACKARD COMPANY			COURTENAY III, ST JOHN	
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Fort Collins, CO 80527-2400			2194	

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Please find below and/or attached an Office communication concerning this application or proceeding.

<u>, </u>					
	Application No.	Applicant(s)			
	09/845,844	JOHNSON ET AL.			
Office Action Summary	Examiner	Art Unit			
The MAN INC DATE And	St. John Courtenay III	2126			
The MAILING DATE of this communication appe Period for Reply	ears on the cover sheet with the c	orrespondence address			
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply specified above, the maximum statutory period with the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	6(a). In no event, however, may a reply be tim within the statutory minimum of thirty (30) days ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. O (35 U.S.C. § 133).			
Status					
 1) ⊠ Responsive to communication(s) filed on 22 February 2005. 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final. 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. 					
Disposition of Claims					
4) Claim(s) 1-25 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw 5) Claim(s) is/are allowed. 6) Claim(s) 1-25 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or					
Application Papers					
9) The specification is objected to by the Examiner 10) The drawing(s) filed on 30 April 2001 is/are: a) Applicant may not request that any objection to the d Replacement drawing sheet(s) including the correction 11) The oath or declaration is objected to by the Examiner	☑ accepted or b)☐ objected to be rawing(s) be held in abeyance. See on is required if the drawing(s) is object.	ected to. See 37 CFR 1.121(d).			
Priority under 35 U.S.C. § 119					
12) Acknowledgment is made of a claim for foreign part a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list of	have been received. have been received in Application ty documents have been received (PCT Rule 17.2(a)).	on No d in this National Stage			
	2	STUOHN COURTENAY IN			
Attachment(s)	_	PRIMARY EXAMINER			
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	4) Interview Summary (Paper No(s)/Mail Dat 5) Notice of Informal Pa	te			
Paper No(s)/Mail Date	6)				

U.S. Patent and Trademark Office PTOL-326 (Rev. 1-04)

Response to Amendment

Responsive to Applicant's arguments, new grounds of rejection are set forth below.

35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Monday et al.** (U.S. Patent 6,480,860).

As per independent claim 1:

Gao discloses the invention substantially as claimed:

Gao discloses a method for the communication of data between at least one host system and a storage management system, the method comprising:

defining structure [col. 5, line 30] for data related to each of the at least one host systems to be transported from the at least one host system to the storage management system using a markup language [e.g., see "The memory 72 also stores Universal Device Descriptor (UDD) files 76. The UDD files 76 may include a UDD file for the server 60 and UDD files for other digital devices within the networked environment 20" and associated discussion, col. 3, beginning line 29; see also col. 4, beginning line 45: "The present invention uses XML syntax to support new functionality. The XML syntax of the invention forms the previously described Unified Device Descriptor UDD. The invention is disclosed as an application of XML in which a Unified Device Descriptor (UDD) is used to specify

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digital devices. Each digital device has a unique UDD dedicated to it, which describes parameters, such as device characteristics, capabilities, features, status, geographic information, maintenance record, job billing information, support/administration information, and the like. Using Document Type Definition (DTD), the invention precisely defines the logical structure of a UDD, so that each manufacture or device administrator will fill the contents for its devices. One of the major benefits of using a DTD in XML that it makes each UDD precisely searchable using standard Internet searching technologies."]; and

 maintaining the data related to each of the at least one host systems at the storage management system [e.g., see Memory 72 as described col. 3, line 29 and as shown as part of server computer 60, fig. 1, col. 3, see discussion beginning line 12].

However, **Gao** does not *explicitly* teach the following additional limitations:

Monday teaches transporting the defined data from the at least one host system to the storage management system via a remote procedure call [**Monday** teaches the use of remote procedure calls using XML, col. 5, line 58, see also col. 5, lines 25-31; see also col. 7, lines 21-67, col. 8, lines 29-46; see also retrieving data from the database and subsequent translation step and associated discussion col. 8, lines 29-46, specifically "XML translator 226"].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** by implementing the improvements detailed above because it would provide **Gao's** system with the enhanced capability of reducing the server load and increasing programmer control over "how XML requests are processed and returned" [see **Monday**, col. 8, lines 39-46].

As per dependent claim 2:

Gao teaches the markup language includes a facility to define tags, as well as structural relationships between tags [e.g., see Gao's use of XML and associated discussion, beginning col. 4, line 15].

Monday teaches the markup language includes a facility to define tags, as well as structural relationships between tags [e.g., see sample XML data request and associated XML tags, as shown in figures 6-8; see supporting discussion col. 9].

As per dependent claim 3:

Gao teaches the markup language is extensive markup language (XML) [col. 4, line 15].

Monday teaches the markup language is extensive markup language (XML) [col. 5, line 4].

As per dependent claim 4:

Monday is silent regarding any operating system dependency with respect to the use of a RPC between machines; therefore, the Examiner has interpreted the breadth of Monday's disclosure as not being limited to any particular operating system [see RPC disclosure, col. 6, line 58].

2. Claims 1- 4, 7, 8, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Humpleman et al.** (U.S. Patent 6,466,971).

As per independent claim 1:

Gao discloses the invention substantially as claimed:

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Gao discloses a method for the communication of data between at least one host system and a storage management system, the method comprising:

- defining structure [col. 5, line 30] for data related to each of the at least one host systems to be transported from the at least one host system to the storage management system using a markup language [e.g., see "The memory 72 also stores Universal Device Descriptor (UDD) files 76. The UDD files 76 may include a UDD file for the server 60 and UDD files for other digital devices within the networked environment 20" and associated discussion, col. 3, beginning line 29; see also col. 4, beginning line 45: "The present invention uses XML syntax to support new functionality. The XML syntax of the invention forms the previously described Unified Device Descriptor UDD. The invention is disclosed as an application of XML in which a Unified Device Descriptor (UDD) is used to specify digital devices. Each digital device has a unique UDD dedicated to it, which describes parameters, such as device characteristics, capabilities, features, status, geographic information, maintenance record, job billing information, support/administration information, and the like. Using Document Type Definition (DTD), the invention precisely defines the logical structure of a UDD, so that each manufacture or device administrator will fill the contents for its devices. One of the major benefits of using a DTD in XML that it makes each UDD precisely searchable using standard Internet searching technologies."; and
- maintaining the data related to each of the at least one host systems at the storage management system [e.g., see Memory 72 as described col. 3, line 29 and as shown as part of server computer 60, fig. 1, col. 3, see discussion beginning line 12].

However, **Gao** does not *explicitly* teach the following additional limitations:

Humpleman teaches transporting the defined data from the at least one host system to the storage management system via a remote procedure call [e.g., see XMLRPC format discussion beginning col. 18, line 65; see also use of XML, col. 12, discussion beginning line 6; see also use of "XML.Remote

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Procedure Call", col. 14, line 17; also RPC using XML discussion col. 18, beginning line 45; see also XML RPC code listing, EXAMPLE 1, col. 19; see also XMLRPC format discussion beginning col. 18, line 65].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** by implementing the improvements detailed above because it would provide **Gao's** system with the enhanced capability of "allowing the use of different XML RPC formats without changing other aspects of the device to device control architecture" [**Humpleman**, col. 16, lines 30-35].

As per dependent claim 2:

Gao, as modified by **Humpleman**, teaches the markup language includes a facility to define tags, as well as structural relationships between tags [e.g., see **Humpleman** XML RPC code listing, EXAMPLE 1, col. 19 and associated XML tags; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 3:

Gao, as modified by **Humpleman**, teaches the markup language is extensive markup language (XML) [e.g., see **Humpleman** use of XML, see col. 12, discussion beginning line 6 see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 4:

Humpleman is silent regarding any operating system dependency with respect to the use of a RPC between machines; therefore, the Examiner has interpreted the breadth of **Humpleman's** disclosure as not being limited to any particular operating system [see **Humpleman** XML RPC code listing, col. 19].

As per dependent claim 7:

Gao, as modified by **Humpleman**, teaches the defining is performed by at least one host agent residing on the at least one host system [e.g., see **Humpleman** "software agent" and associated discussion col. 13, lines 12-20 and col. 13, lines 51-53].

As per dependent claim 8:

Gao, as modified by **Humpleman**, teaches the transporting is facilitated by the at least one host agent [e.g., see **Humpleman** "agent" discussion col. 13, beginning line 12].

As per dependent claim 11:

Gao, as modified by **Humpleman**, teaches processing the defined data at the storage management system [e.g., see **Humpleman** "local device XML interface" and associated discussion col. 16, beginning line 13; also col. 18, lines 40-52; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 12:

Gao, as modified by **Humpleman**, teaches the processing includes parsing the defined data using a markup language [see **Humpleman** "parsing and validating XML messages", and associated discussion col. 16, lines 21-35; also col. 18, lines 40-52; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 13:

Gao, as modified by **Humpleman**, teaches the parsing is performed by a standard extensive markup language (XML) parser [see **Humpleman** "XML parser 74" and associated discussion col. 16, lines 24; see also XML parser discussion col. 18, lines 40-52; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 14:

Gao, as modified by **Humpleman**, teaches the processing includes providing the defined data to a flexible interface of the storage management system [e.g., see **Humpleman** "local device XML interface" and associated discussion col. 16, beginning line 13; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claims 15 - 17:

Gao, as modified by **Humpleman**, teaches the use of an XML parser which appears to inherently offer standard XML parsing capabilities as claimed [see **Humpleman** "XML parser 74" and associated discussion col. 16, lines 24; see also XML parser discussion col. 18, lines 40-52; see "local device XML interface" and associated discussion col. 16, beginning line 13; see also **Gao** XML discussion, col. 4, beginning line 15].

As per dependent claim 18:

Gao, as modified by **Humpleman**, teaches the transporting occurs in response to a request from the storage management system, the request being made after the storage management system determines a change in device information has occurred since a prior transmission of data to the storage management system [e.g., see **Humpleman** "local device XML interface" and associated discussion col. 16, beginning line 13; see also **Gao** XML discussion, col. 4, beginning line 15].

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3. Claims 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Humpleman et al.** (U.S. Patent 6,466,971) in view of (U.S. Patent), and further in view of **Wollrath et al.** (U.S. Patent 6,487,607).

As per dependent claim 5:

Gao & **Humpleman** discloses the invention substantially as claimed, as discussed above.

However, **Gao** & **Humpleman** do not *explicitly* teach the following additional limitations:

Wollrath teaches the use of JAVA remote method invocation, as claimed [e.g, see col. 4, line 20 and associated discussion].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** & **Humpleman** by implementing the improvements detailed above because it would provide the system taught by **Gao** & **Humpleman** with the enhanced capability of avoiding the blocking of a calling process while it waits for a response from the called remote procedure, as typically occurs with synchronous remote procedure calls, and/or for transporting objects within the distributed system for use in connection with processes executing on remote machines [e.g., see **Wollrath** col. 4, discussion beginning line 35; see also col. 3, lines 9-15].

As per dependent claim 6:

Humpleman teaches the defined device data is device discovery data [e.g., see examining device capabilities col. 14, lines 39-52; see also the use of XML to represent CD devices, col. 20, line 55].

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4. Claims 9 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Humpleman et al.** (U.S. Patent 6,466,971), and further in view of (U.S. Patent) in view of **Monday et al.** (U.S. Patent 6,480,860).

As per dependent claim 9:

Gao & **Humpleman** discloses the invention substantially as claimed, as discussed above.

However, **Gao** & **Humpleman** do not *explicitly* teach the following additional limitations:

Monday teaches retrieving the data to be transported to the storage management system from at least one storage device embedded in or communicatively coupled to the at least one host system prior to defining the structure of the data to be transported [e.g., see retrieving data from the database and subsequent translation step and associated discussion col. 8 lines 29-46, specifically "XML translator 226"].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** & **Humpleman** by implementing the improvements detailed above because it would provide the system taught by **Gao** & **Humpleman** with the enhanced capability of reducing the server load and increasing programmer control over "how XML requests are processed and returned" [See **Monday**, col. 8, lines 39-46].

As per dependent claim 10:

Humpleman teaches the retrieving is performed by at least one host agent residing on the at least one host system [e.g., see "agent" and associated discussion col. 13, beginning at lines 12 & 51].

35 U.S.C. §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 19, 20 & 22 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Gao** (U.S. Patent 6,581,094).

As per independent claim 19:

Gao teaches a system for the monitoring and management of storage-related devices of an enterprise environment, the system comprising:

 means for obtaining discovery information from at least one physical storage-related device of the enterprise environment [e.g., see col. 5, lines 1-21: "The invention can be appreciated by envisioning a digital device's installation, discovery, connection, use, and management in the Internet environment in the way that the data has been published: device installation and configuration=data modeling; device registration=data publishing; device discovery=data searching; device connect=data access; device use=data access interactively; and device status=data query/data pushing/data interchange. Each device's UDD may be stored in the device itself. Alternately, the UDDs can be consolidated into a central server which serves the device. The system administrator can register the UDDs into the default search engine or some major search engine which is XML enabled. The UDD acts as a focal point between the digital device and a network administrator. Once a user locates a device's UDD, a variety of actions can be taken to interact with this UDD. The system administrator may interact with the UDD to perform administration tasks via the system administration applications 52. Device manufacturers

can interact with the UDD to do troubleshooting and maintenance tasks via the device vendor applications 54."];

- means for defining structure of the obtained information using a markup language [e.g., see col. 3, beginning line 45: " The present invention uses XML syntax to support new functionality. The XML syntax of the invention forms the previously described Unified Device Descriptor UDD. The invention is disclosed as an application of XML in which a Unified Device Descriptor (UDD) is used to specify digital devices. Each digital device has a unique UDD dedicated to it, which describes parameters, such as device characteristics, capabilities, features, status, geographic information, maintenance record, job billing information, support/administration information, and the like. Using Document Type Definition (DTD), the invention precisely defines the logical structure of a UDD, so that each manufacture or device administrator will fill the contents for its devices. One of the major benefits of using a DTD in XML that it makes each UDD precisely searchable using standard Internet searching technologies. In contrast, with current HTML based search technologies, a search results in a large amount of returned information that is irrelevant or false. Thus, the invention facilitates the operation of using a web browser to identify digital devices. The Internet based technique of the invention also facilitates cross-platform functionality. Thus, digital devices using different operating systems and connectivity schemes can still communicate."]; and
- means for transporting the obtained information from the
 defining means for further processing [e.g., see col. 5,
 beginning line 22: "Executable modules 78 in the form of Java applets or
 any other appropriate scripts can be embedded into the UDD to perform various
 information exchange, status monitoring, and format conversion operations. For
 example, the Java applets may be implemented to perform individual and specific
 tasks such as, status monitoring, job spooling, and error handling."].

As per dependent claim 20:

Gao teaches the markup language is extensive markup language (XML) [e.g., see "XML" discussion, beginning col. 4, line 15].

As per dependent claim 22:

Gao teaches the further processing includes a processing means flexible to differences between an interface of the defining means and an interface of the processing means [e.g., see "set of novel executable programs" and associated discussion, beginning col. 2, line 61].

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Wollrath et al.** (U.S. Patent 6,487,607).

As per dependent claim 21:

Gao discloses the invention substantially as claimed, as discussed above.

However, **Gao** does not *explicitly* teach the following additional limitations:

Wollrath teaches the means for transporting includes the use of JAVA remote method invocation, as claimed [e.g, see col. 4, line 20 and associated discussion].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** by implementing the improvements detailed above because it would provide the **Gao's** system with the enhanced capability of avoiding the blocking of a calling process while it waits for a response from the called remote procedure, as typically occurs with synchronous remote procedure calls, and/or for transporting objects within the distributed system for use in connection with processes executing on remote machines [e.g., see **Wollrath** col. 4, discussion beginning line 35; see also col. 3, lines 9-15].

7. Claims 23 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Humpleman et al.** (U.S. Patent 6,466,971).

As per independent claim 23:

Gao discloses the invention substantially as claimed:

Gao teaches a system for the monitoring and management of storage-related devices of an enterprise environment, the system comprising:

- at least one host system [e.g., see "supervisory computer . 40" and associated discussion, beginning col. 2, line 53],
- a storage management system, wherein the storage management system is communicatively coupled to the at least one host system through a flexible interface, wherein at least one of the at least one host agent process is operable to define device discovery information in a markup language format and transport the formatted discovery information to the storage management system via a remote procedure call [e.g., see col. 5, lines 1-21: "The invention can be appreciated by envisioning a digital device's installation, discovery, connection, use, and management in the Internet environment in the way that the data has been published: device installation and configuration=data modeling; device registration=data publishing; device discovery=data searching; device connect=data access; device use=data access interactively; and device status=data query/data pushing/data interchange. Each device's UDD may be stored in the device itself. Alternately, the UDDs can be consolidated into a central server which serves the device. The system administrator can register the UDDs into the default search engine or some major search engine which is XML enabled. The UDD acts as a focal point between the digital device and a network administrator. Once a user locates a device's UDD, a variety of actions can be taken to interact with this UDD. The system administrator may interact with the UDD to perform administration tasks via the system administration applications 52. Device manufacturers can interact with the UDD to do troubleshooting and maintenance tasks via the device vendor applications 54."];

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However, **Goa** does not explicitly disclose the following addition limitations:

Humpleman teaches at least one host agent process, wherein each of the at least one host agent process resides on a respective host system of the at least one host system [e.g., see **Humpleman** "software agent" and associated discussion col. 13, lines 12-20 and col. 13, lines 51-53].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** by implementing the improvements detailed above because it would provide **Gao's** system with the enhanced capability of using a definition and interface data type to create an XML document [**Humpleman**, col. 13, lines 12-20; lines 51-63].

As per dependent claim 24:

Gao teaches the markup language format is an extensive markup language XML format [e.g., see "XML" discussion, beginning col. 4, line 15; **Humpleman** teaches the use of XML to implement a Remote Procedure Call, col. 16, discussion beginning line 31].

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8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Gao** (U.S. Patent 6,581,094) in view of **Humpleman et al.** (U.S. Patent 6,466,971), and further in view of **Wollrath et al.** (U.S. Patent 6,487,607).

As per dependent claim 25:

Gao, as modified by **Humpleman**, discloses the invention substantially as claimed, as discussed above.

However, **Gao** & **Humpleman** do not *explicitly* teach the following additional limitations:

Wollrath teaches the remote procedure call is Java Remote Method Invocation (RMI), as claimed [e.g, see col. 4, line 20 and associated discussion].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Gao** & **Humpleman** by implementing the improvements detailed above because it would provide the system taught by **Gao** & **Humpleman** with the enhanced capability of avoiding the blocking of a calling process while it waits for a response from the called remote procedure, as typically occurs with synchronous remote procedure calls, and/or for transporting objects within the distributed system for use in connection with processes executing on remote machines [e.g., see **Wollrath** col. 4, discussion beginning line 35; see also col. 3, lines 9-15].

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How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to St. John Courtenay III, whose telephone number is 571-272-3761. A voice mail service is also available at this number. The Examiner can normally be reached on Monday - Friday, 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-AI who can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

PTO CENTRAL FAX NUMBER: 703-872-9306

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

ST. JOHN COURTENAY IN PRIMARY EXAMINER